Patient Care Review

17 November 2000

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Objectives

- Discuss the etiology of a WRAMC patient's disease state
- Discuss the nutritional implications of the patient's care for his disease
- Discuss the appropriate Nutritional Care Plan
- Discuss the potential outcomes of care

Patient Selection

- Identification: TB
- 78 years old
- white male
- Admission Date: 23 October 2000

Patient Selection

- Chief Complaints:
  - Recurrent Bladder Tumor (Superficial urothelial tumor)
  - Pending Surgery
  - Unable to relieve himself when urge occurs
- Diagnosis:
  - Distal Ureteral Stricture

Patient Selection

- WRAMC Medical Nutrition Care Plan:
  - Malnutrition in Adults (August 1998)
  - Cancer (August 1998)

- Objectives:
  - Assess degree of malnutrition
  - Facilitate adequate nutritional intake
  - Monitor efficacy of medical nutrition

Definition: Bladder Cancer

- Transitional cell carcinoma (urothelial):
  - Most common form (90%)
  - Most likely to spread
- Squamous cell carcinoma:
  - Accounts for 3-8%
  - Likely to invade deeper layers of bladder
- Adenocarcinomas:
  - Accounts for 1-2%
  - Involve deeper layers of the bladder

Sub-types of Urothelial Tumors

- Noninvasive: innermost layer of the bladder, the urothelium
- Invasive: spread from urothelium to deeper layers
- Superficial: noninvasive and invasive that have not spread
- Papillary: project into the center of bladder
- Flat: do not grow toward the hollow part of bladder

Etiology: Bladder Cancer

- Sixth most common cancer
- 53,200 new cases in year 2000
- 12,200 people will die
- Highest rates occur in industrialized countries
- Lowest rates in Asia and South America
- 3-4 times higher in men than women

- Whites are twice as likely as African Americans
- Most are in late 60’s
- > 70 y/o 2-3 times greater than those 55-69

Staging: Bladder Cancer

- Stage 0: *In situ* cancer
- Stage A: limited to the inside surface
- Stage B: extends through the thickness
- Stage C: extends to the outside
- Stage D: spread to other organs, like bowels, rectum, lungs, liver

Bladder Cancer

- Causes and Risks:
  - Smoking
  - Chemicals
  - Race
  - Age
  - Chronic bladder problems
  - Prior incidence of bladder cancer
- Symptoms:
  - Painless bleeding in the urine
  - Changes in bladder habits
  - Urge for relief but unable to do so

Treatment: Bladder Canc

- Depends on type of tumor and stage
  - Stage 0 – A: surgery
  - Stage B: aggressive surgery
  - Stage C: aggressive surgery, radiation, chemotherapy
  - Stage D: radiation and chemotherapy

Treatment: Bladder Cancer

- Radiation has two roles:
  - Help with local control of the cancer
  - Increase the cure rate
- Chemotherapy for variety of situations:
  - Topical chemotherapy to cancer site (stages 0, A)
  - Prior to surgery, combined with radiation
  - After surgery, combined with radiation
  - When cancer not cured or has reoccurred, and when stage D

Prognosis: Bladder Cancer

- Survival depends on type and how extensive the cancer
- Majority with early stages can be cured with surgery alone
- When cure not possible, survival could vary from months to years

Nutritional Implications:
Chemotherapy and Radiation

- Loss of appetite
- Sore or dry mouth or throat
- Changed sense of taste or smell
- Nausea and Vomiting
- Diarrhea or Constipation
- Weight gain
- Tooth decay
- Lactose intolerance

Past Medical History

- Bladder Cancer
- Gastroesophogial Reflux Disease
- Hypertension
- Arthritis
- Diverticulosis
- Urosepsis (2 Sep –29 Sep WRAMC)
  - S. aureus and Flavobacterium (urine)
  - S. epidermidis (blood)
  - E. coli (blood and urine)

Past Surgical History

- WRAMC
  - Bladder Tumor Resection
  - Right UVJ Dilation
  - Right Ureteral Stent Placement
- 1994: TURBT
- 1976: Open Prostrate

Psycho-Social History

- Retired USAF O-6
- Non smoker
- Occasional drinker
- Married
- Receives healthcare from visiting nurse or other therapist in home

Nutrition Histor

- Diet at home:
  - Does not eat breakfast at home
  - Occasionally eats lunch
  - Eats dinner regularly
  - Prefers soups, soft desserts, Coca-Cola
- Admission diet order: Regular

Physical Exam

- Lost 20 lbs at previous WRAMC hospitalization
- Height: 5’8”
- Weight: 153 lbs
- UBW: 186 lbs (2 ½ months ago)
- Frame Size: Large
- Desirable Body Weight: 155-176 lbs
- Percent DBW: 100%
- Percent UBW: 87% UBW

Medications with Nutritional Significance

Medication (Classification)	Potential Drug-Nutrient Interactions	Blood/Serum	Symptoms Patient is experiencing
Gentamicin sulfate (Antibiotic)	Anorexia, low wt, stomatitis, increase salivation	Elevate: BUN, creat, Na Lower: K, Mg, Ca	Reduced weight Elevated creat Lowered K
Ancef (Antibiotic)	Anorexia, oral candidiasis, sore mouth, nausea, diarrhea	Elevate: BUN, creat, SGOT, SGPT, LDH, alk phos, GGT	Elevated creat

Labs with Nutritional Significance

- Cancer Care Plan
  - Albumin, prealbumin, electrolytes, Ca, glucose, WBC, Hemoglobin, Hematrocrit, creatinine
  - Lab data influenced by non-nutritional factors:
    - Cancer or Metastasis
    - drug toxicities
    - Transfusions
    - Hydration
    - Edema

Labs with Nutritional Significance

- Malnutrition Care Plan
  - Na, K, bicarbonate, P, Mg, glucose, TG, albumin, prealbumin, serum iron, transferrin, ferritin, fasting folate and B12, BUN, creatinine
  - Decreased values associated with malnutrition, poor intake, starvation, malabsorption, low protein diet (BUN), malnutrition (BUN), decreased muscle mass (creat)

Labs with Nutritional Significance

	Na (137-145)	K (3.6-5)	Glu (75-110)	BUN (9-20)	Creat (0.8-1.5)
1 Nov	140	4.2	146	31	1.6
2 Nov	141	4.3	129	28	1.7
3 Nov	138	3.5	114	23	1.7
5 Nov	141	3.5	104	18	1.7
6 Nov	142	4.0	98	13	1.8
7 Nov	141	3.2	97	12	1.8
8 Nov	141	3.1	94	17	1.9

Diet Orders

Date	Actual Diet Order	Recommended Diet Order
1 Nov (Admission)	Regular Diet	Same w/preferences 2LT Trust (2 Nov)
3 – 4 Nov	Clear Liquid	
5 – 9 Nov	Regular Diet	Soft Diet with Ensure 2LT Trust (7 Nov)

Appropriateness of Diet Orders

- 1 November:
  - Appropriate for diagnosis
  - Consuming <25% of meals
- 7 November:
  - Appropriate, but recommend change to soft
  - Pt consuming <25% of meals
  - Add Ensure supplements
  - Provide Pt with soft snacks

Nutrition Diagnostic Statement

- 2 Nov 00: Patient at risk for mild energy/protein malnutrition secondary to poor PO intake during treatment for ureteral stricture as indicated by his unwillingness to consume adequate amount of food, and 13% weight during prior WRAMC admission.

- Mild: 90 – 85% UBW

Assessment of Nutrition Status

- Estimated caloric needs
  - 1890 kcal/day
  - Harris-Benedict Equation
  - Stress Factor: 1.2 (mildly stressed, major surgery)
  - Activity Factor: 1.2 (bedridden)
- Estimated protein needs
  - 90 – 104 gm/day
  - 1.3 – 1.5 gm/kg (for repletion)

Goal of Therapy

- Ensure that patient receives daily requirement of calories with increased consumption of meals and supplemental snacks to promote healing

Dietary Plans

- Recommendations:
  - Change diet order to soft diet
  - Add Ensure to diet TID
  - Order prealbumin
- Follow up plans:
  - Provide Pt with ice-cream snacks
  - Initiate 48-hour calorie count

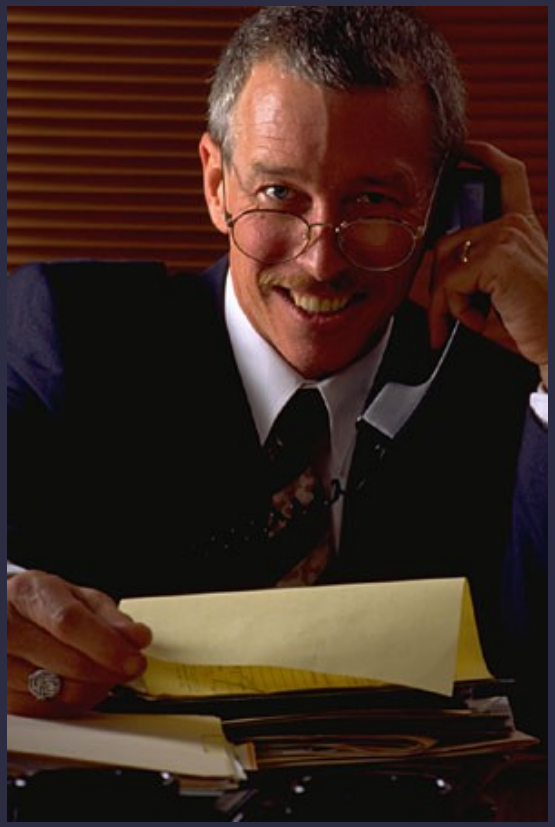
Outcomes of Care

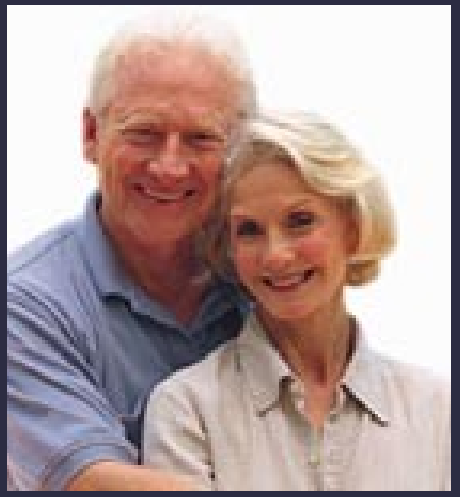
- Potential Health Outcomes
  - Decrease morbidity
  - Improve physical functioning
  - Improve visceral protein and anthropometrical status
  - Normalize electrolyte, vitamin, mineral, and fluid status
- Potential Resources Saved
  - Decreased length of hospitalization and readmission
  - Save cost to government of healthcare labor

Conclusion

- Presented the etiology of Bladder Cancer
- Discussed the nutritional implications of the patient’s care for his disease
- Reviewed the appropriate Nutritional Care Plan
- Proposed potential outcomes of care

Questions and Discussion





Questions and Discussion